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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,226	10/09/2003	Koji Irikura	0666.1400002	6480

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STERNE, KESSLER, GOLDSTEIN & FOX PLLC
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/681,226

Applicant(s)

IRIKURA ET AL.

Examiner

Frank Vanaman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☒ Certified copies of the priority documents have been received in Application No. 09/489,680.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

Status of Application

1. Applicant's preliminary amendment to the claims and specification has been entered in the application. Claims 16-25 are pending, claims 1-15 having been canceled.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copies have been filed in parent Application No. 09/489,680, filed on Jan 24, 2000.

Specification

3. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b), which sets forth the requirements for a proper abstract of the disclosure.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Hopkins et al. (US 4,174,762). Hopkins et al. teach an apparatus for steering and driving a vehicle including a first transmission (32, 40, 42, 44, 46, 48, 50, etc.) interposed between a prime mover (15) and drive wheel elements (12, 14), including a variable displacement pump (30), the speed and direction of which may be adjusted, and variable

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displacement motor (32), a second transmission (98, 100, 102, 104, 106, etc.) which causes differential drive between the two sides for steering, a steering device (96, 112, 114) which causes step-less increase or decrease (control through 112) of a second motor (98) to achieve differential steering; wherein a reverse operation comprises arranging for the turning of the pump (30) in the opposite direction (col. 3, lines 48-51), and the changing of the steering direction (through 116) such that the steering transmission is switched to the opposite direction. While Hopkins et al. fail to specifically state that the reverse control both shifts the direction of the first pump and the steering direction control valve (116) it is deemed an inherent feature, in that the switching of the steering control direction is expressly taught as being associated with the engagement of a reverse drive mode (col. 4, lines 15-17).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins et al. (Cited above). The reference to Hopkins et al. is discussed above and fails to teach the reversing control as being a pedal or handle, in that the precise nature of the control device is not mentioned. Both control pedals and control levers provided with handles are extremely old and well known as vehicle operator interface devices, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the reversing control as either a handle or a pedal for the purpose of allowing a user to operate the function using a commonly known interface device.

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9. Claims 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hopkins et al. in view of Seaberg (US 4,471,669). The reference to Hopkins et al. is discussed above and fails to teach the steering transmission as being driven by a variable displacement pump, and including a variable displacement motor. Seaberg teaches that it is old and well known to separate out the pump and motor sets for driving (26, 30) and steering (28, 32), each being of variable displacement. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide separate pump and motor sets for each of the steering and driving functions of Hopkins et al. as suggested by Seaberg, for the purpose of insuring a separate source of supply for each function, so as to prevent pressure or capacity robbing between the two systems, to the point the engine is capable of driving both pumps, and to make each motor-pump set to be of variable displacement so as to reduce the quantity of external extra valving, and to use a minimum number of different types of components (i.e., the avoidance of plural types of motors or pumps).

As specifically regards claims 20, 21, 23 and 25, the references to Hopkins et al. and Seaberg fail to teach the reversing control as being a pedal or handle and the speed control device as being a pedal, in that the precise nature of the control devices are not mentioned. Both control pedals and control levers provided with handles are extremely old and well known as vehicle operator interface devices, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the reversing control as either a handle or a pedal for the purpose of allowing a user to operate the function using a commonly known interface device. As more particularly regards claim 25, the use of an acceleration pedal which causes the acceleration of a vehicle without regard to the direction the transmission is set to drive, is extremely old and well known, and it would have been obvious to one of ordinary skill in the art at the time of the invention to use an accelerator pedal type interface in that it is universally familiar to vehicle operators.

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Paulson (US 2,530,720), McCallum (US 2,745,506), Campbell (US 3,059,416), Cryder et al. (US 3,477,225), Vissers (US 3,612,199), Hillmann et al. (US 4,320,810), Nicol (US 5,383,528), Kouno et al. (US 5,850,886), and Ishimori et al. (FR 2,624,449) teach drive systems of pertinence.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 703-308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is 703-308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to one of the following fax servers:

Regular Communications/Amendments: 703-872-9326
After Final Amendments: 703-872-9327
Customer Service Communications: 703-872-9325

F. VANAMAN
Primary Examiner
Art Unit 3618


3/30/04